

WHAT IS CLAIMED IS:

1. A system for manipulation of objects comprising:

N objects, where N is greater than or equal to 2 and is an integer; and

means for controlling and 2D locating of the N objects.

2. A system as described in Claim 1 wherein the controlling means includes indicators disposed on the object.

3. A system as described in Claim 2 wherein the controlling means includes sensing means for locating the objects.

4. A system as described in Claim 3 wherein position indicators include emitters which indicate a position of an object.

5. A system as described in Claim 4 wherein the objects are vehicles.

6. A system as described in Claim 5 wherein the controlling means includes a vehicle controller disposed with each vehicle.

7. A system as described in Claim 6 wherein the vehicle controller of each vehicle includes an MCU.

8. A system as described in Claim 7 wherein the sensing means includes sensors.

9. A system as described in Claim 8 wherein the emitters include LEDs.

10. A method for manipulating objects comprising the steps of:

receiving information from N objects, where N is greater than or equal to 2 and is an integer, at a centrally controlling and 2D locating controller;

determining 2D locations by the controller of the N objects; and

transmitting from the controller directions to the N objects for the N objects to move.

11. A method as described in Claim 10 wherein the transmitting step includes the step of transmitting from the controller kinematic parameters to the N objects.

12. An apparatus for tracking comprising:

N objects, where N is greater than or equal to 2 and is an integer, each object having an emitter which emits light; and

means for 2D sensing of the N objects over time from the light emitted by each emitter.

13. An apparatus as described in Claim 12 including a planar element on which the N objects are disposed, and wherein the

sensing means includes at least 2 1-D sensors that sense the light emitted from the edge of the planar element on which the objects are disposed.

14. A method for tracking comprising the steps of:

emitting light from N objects, where N is greater than or equal to 2 and is an integer; and

sensing 2D locations of the N objects over time from the emitted light from the N objects.

15. A method as described in Claim 14 wherein the sensing step includes the step of sensing 2D locations of the N objects over time from the emitted light from the N objects through an edge of a planar element on which the N objects are disposed.